

AMENDMENTS TO THE CLAIMS:

4 a processor sending one or more control data using one or more lines
5 of a serial control data bus;

7 an interface electronics module, receiving the one or more lines of the
8 serial control data bus and selecting one or more signals
9 corresponding to one or more addresses of the one or more lines; and

the interface electronics module, sending the selected one or more signals to an electronics module within the RF enclosure.

1 4. (CURRENTLY AMENDED) The method of claim 1, wherein integrated
2 circuit technology is used to select the one or more signals.

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1 8. (ORIGINAL) The method of claim 7, wherein one or more Schmitt trigger
2 input buffers are used to eliminate potential noise problems caused by the
3 RF filtered connectors.

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4 a processor, operable to send and receive data, coupled to one or
5 more lines of a serial control data bus;

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7 an interface electronics module, operable to select one or more signals
8 corresponding to one or more addresses of the one or more lines of
9 the serial control data bus, said RF interface module coupled to an RF
10 enclosure; and

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12 an electronics module physically located within the RF cavity, operable
13 to receive the one or more lines selected by the interface electronics
14 module, said electronics module coupled to the interface electronics
15 module.

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1 10. (ORIGINAL) The structure of claim 9, wherein the interface electronics
2 module selects each signal with a same line number.

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1 11. (ORIGINAL) The structure of claim 9, wherein the processor is a
2 microprocessor.

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1 12. (CURRENTLY AMENDED) The structure of claim 9, wherein integrated
2 circuit technology is techniques are used to select the one or more signals.

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1 13. (ORIGINAL) The structure of claim 9, wherein the serial control data bus is
2 an SPI bus.

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1 14. (ORIGINAL) The structure of claim 9, wherein the one or more signals are
2 selected by the processor.

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1 15. (ORIGINAL) The structure of claim 9, wherein an RF filtered connector is
2 coupled to the interface electronics module and to the RF enclosure, said
3 RF enclosure providing an interface to the RF cavity.

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1 16. (ORIGINAL) The structure of claim 15, wherein one or more Schmitt
2 trigger input buffers are used to eliminate potential noise problems caused
3 by the RF filtered connectors.

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1 17. (ORIGINAL) The method of claim 1, wherein sending the selected one or
2 more signals to the electronics module within the RF enclosure is
3 performed in accordance with a gating functionality of the interface
4 electronics module.

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18. (ORIGINAL) The method of claim 17, wherein the gating functionality is a temporal gating functionality.